

# Profiles of Speakers

## Sun W. Chun

Chairman  
APEC Experts' Group on Clean Fossil Energy  
US Department of Energy  
Washington, U.S.A.

Sun W. Chun joined the Washington, D.C. office of the Department of Energy as the Senior Executive Advisor to the Assistant Secretary for Fossil Energy in December 1996. As such, he has the responsibility for a wide range of duties including advancing the deployment of US-developed fossil energy technologies to domestic and international markets. Dr Chun will develop a joint strategy with US industry and other government agencies to capitalize on the US investment in clean coal technologies.

Dr Chun served as the Director of the US Department of Energy's Pittsburgh Energy Technology Center (PETC) from 1970 to 1996. He directed the Department's research and development efforts in coal programs including: Coal Preparation, Alternative Fuels, Advanced Combustion, Flue Gas Cleanup, Coal Liquefaction, Magnetohydrodynamics and other advanced technologies. He also oversaw the Center's role in the Synthetic Fuels Program and Clean Coal Technology Program, and implemented joint research programs with the Department of Defense. During his tenure as the Director, he initiated minority programs for Historically Black Colleges and Universities and many international cooperative programs.

Dr Chun has also served as PETC's Deputy Director and Director of its Process Sciences Division. Before joining the Center in 1975, he held management positions with the Gulf Research and Development Company, managing research in coal and hydrocarbon process technology.

Dr Chun's management training includes completion of Gulf's five-year executive training program, the Department's two-year Executive Development Program, the Federal Executive Institute, the Systems Management College of the US Armed Forces, and the Harvard University National Security Program.

He is a member of the American Institute of Chemical Engineers, the American Chemical Society, the American Management Association, the American Association for the Advancement of Science, Sigma Xi, and the Pittsburgh Federal Executive Board.

Honors received by Dr Chun include:

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|------------|---|
| 1981       | The Benjamin G. Lamme Award for outstanding service from the Ohio State University, the highest honor from the College of Engineering.  |
| 1983       | Diamond Jubilee Award for Outstanding Service from the American Institute of Chemical in celebration for its 75th anniversary.  |
| 1987       | Whitehouse Recognition for creating the first Energy Program for Historically Black College Universities.   |
| 1988       | Leadership Award from the Pittsburgh Coal Conference.   |
| 1991       | Presidential Meritorious Executive Rank Award from President George Bush in recognition of his accomplishments.   |
| 1992       | Award for Innovation in Coal Conversion from the Pittsburgh Coal Conference   |
| 1994       | "Coal Man of the Year" award from the Washington Coal Club  |
| April 1996 | Received one of the highest national honors given by the government of Republic of Korea, the Moran-Jang medal, in recognition of the instrumental role he has played in developing the cooperation between United States and Republic of Korea in energy and environmentally related technologies. |
| 1996       | Presidential Meritorious Executive Rank Award from President Bill Clinton in recognition of his accomplishments.  |
| 1997       | Gold Medal from Secretary Hazel R. O'Leary.<br>Pittsburgh Federal Executive Board changed the name of the "Outstanding Asian-American Students Award" to the "Dr Sun W. Chun Award" for his   |

1997

contribution in creating such a program in the Greater Pittsburgh is.  
Elected to the Chairman's position of the Clean Fossil Energy Expert Group  
for Asia Pacific Economic Cooperation.  
Appointed to position as Consultant Professor at Zhejiang University at  
Hangzhou in the People's Republic of China.

Dr Chun also has many patents and numerous publications in petroleum refining and coal technology to his credit. He has served as the Chairman of the Combined Federal Campaign for the Greater Pittsburgh is, and developed the Outstanding Asian Students Recognition Program.

Dr Chun received his B.Ch.E, M.S., and Ph.D. degrees in Chemical Engineering from the Ohio State University. He and his wife, InMook, have two children, Felicia and Edward.

## **David Anthony Cain**

Chief Consultant-Energy  
Rio Tinto Technology Group  
Australia

Rio Tinto is one of the world's leading mining company, with very substantial interests that are diverse both in geography and product. Group companies in 40 countries employ 35,000 people. Rio Tinto has coal operations in Australia, Indonesia and the USA.

A graduate of the University of NSW, Mr. Cain has over 35 years experience in the minerals industry, the last 25 being with the coal industry in Australia and the USA.

Mr Cain has had a range of Rio Tinto roles including resource project development, technology development and management of research and development. He is currently widely involved in collaborative industry initiatives that focus on coal and the environment and has been active with the Coal Industry Advisory Board to the IEA for many years.

## **Charles J. Johnson**

Coordinator  
Environmental Studies  
East-West Center  
U.S.A.

### **Education**

He has a Ph.D. in mineral economics (specialization coal and energy economics) from the Pennsylvania State University (1972); MS degree in geology from the University of California, Riverside (1968).

He is presently the Coordinator Environmental Studies at the East-West Center in Hawaii, and previously was the Head of the Coal and Environment Project at the Center. He is also an affiliate of the graduate faculty of University of Hawaii.

## **Professional Experience**

Major research areas include: (i) economic analyses of technology and fuel options for reducing energy-related pollution in Asia, (ii) promoting regional energy and environmental cooperation and security, and (iii) assessing new energy resource options in Asia, including coalbed methane and methane hydrates.

For the past seven years he has been the advisor to the chairman of the APEC Experts' Group on Clean Fossil Energy, and is responsible for the publication and distribution of their conference proceedings and research reports. This APEC Experts Group has a focus on new technology and fuel options to produce energy more efficiently with less detrimental emissions to the environment. The U.S. Department of Energy is a substantial source of annual funding.

Has been a consultant to the Harvard Institute for International Development, Asian Development Bank, World Bank, Asia Foundation, Ford Foundation, Commonwealth Secretariat, United Nations, and numerous governments and private energy companies (including RTZ and BHP).

During the past 28 years he has worked in more than 40 countries, and has made about 100 trips to Asia. He has published approximately 80 articles, mostly on coal and related environmental issues in Asia. He has made seven trips to Vietnam to examine Vietnam energy options. He has had numerous TV interviews, including CNN. He is listed in Who's Who in Finance and Industry. He received the Centennial Fellow award from the Pennsylvania State University in recognition of his accomplishments in the field of mineral economics.

## **David Cope**

Team Leader  
Asia Pacific Energy Research Centre (APERC)  
Tokyo, Japan

## **Education**

Obtained a BSc and MSC (Honours) in Chemistry at Waikato University, New Zealand, and a PhD in Chemistry at Auckland University, New Zealand.

## **Professional Experience**

During the latter part of 1999 and early part of 2000, was heavily involved in the production of the APERC study "Electricity Sector Deregulation in the APEC Region". Was also actively involved in the production of other APERC research publications.

Project co-leader on study researching issues related to the Clean Development Mechanism, and team member on project on New and Renewable Energy in the APEC Region. Also responsible for the production quality of major publications (editing, formatting and production).

From December 1996 – August 1999, was employed as a Senior Advisor, External Relations by the New Zealand Ministry of Commerce. This position was responsible for managing the Ministry's membership of, and energy policy position with respect to: the International Energy Agency (IEA); the Australian and New Zealand Minerals and Energy Council (ANZMEC); the APEC Energy Working Group, and other international energy-related fora.

From March 1996 – November 1996 was employed as the Corporate Operations Manager of The

Royal Society of New Zealand. The primary purpose of this position was to provide support to the Chief Executive Officer and to assist in the co-ordination and management of an organisation employing over 20 staff.

From January 1993 – March 1996 was employed as a Senior Policy Analyst with the Ministry of Research, Science and Technology, New Zealand. This position involved responsibility for development of science policy, facilitation of the establishment of long-term research priorities for the Public Good Science Fund, and management of contracts with outside agencies receiving payments on behalf of the Crown. Work with the Ministry also involved responsibility for convening reviews of the relevance and scientific quality of government-funded research within specified science categories.

From 1981 – 1984 was employed as a consultant for the New Zealand firm KRTA Ltd. During this time was engaged in geothermal exploration work, largely in the Philippines, but also in other locations in the Asia Pacific region.

## **John Thaddeus**

Manager  
TNB Fuel Services Sdn Bhd  
(a wholly owned subsidiary of Tenaga Nasional Bhd (TNB), Malaysia)  
Malaysia

### **Education**

Ewell College of Technology, Surrey,  
United Kingdom, OND Sciences (1976)  
University of Surrey, U. Kingdom  
B.Sc. Hon in Electrical & Electronic Engineering (1980)  
Masters in Business Administration  
Ohio University / TNB (1995)

### **Professional Qualifications**

Member of the Institute of Engineers, Malaysia  
Member of the Malaysian Institute of Management

### **Awards**

Confederation of British Industry (CBI) - 1991 - 1992 (attachment training with NEI-PARSONS for 6 months)

### **Professional Experience**

The various posts held in Tenaga Nasional Berhad until now has provided the exposures in the following areas:

Power Plant Operation and Maintenance:  
Restructuring of power plant operation & maintenance structure, team building, development of business targets, maintenance and operational planning.

#### Gas Contract Negotiation and Management:

Negotiation team member for power plant gas contract. Gas contract manager for TNB.

#### Interaction with Government Bodies:

Experience in dealing with government agencies dealing in energy matters.

#### Fuel Price Risk Management:

Experience in fuel oil hedging structures for both static and dynamic hedging mechanisms. Dealings with over-the-counter (OTC) counter parties.

Employer:	TNB Fuel Services Sdn Bhd (Since September 1998). Prior to that with Tenaga Nasional Berhad (TNB) since 1980
September 1998 - Present	Manager (Contract Services), TNB Fuel Services Gas Contract Management, Gas Pipeline Project Coordination, Gas Contract Negotiation Services
January 1996 - August 1998	Manager, Fuel Risk Management Unit, TNB Generation Lead trader for fuel oil hedging activities. At the time fuel oil volumes were in excess of 2 million tonnes a year.
February 1995 – December 1995	Maintenance Manager (Electrical & Mechanical) - power plant Management of maintenance of 900MW open cycle and combined cycle gas-fired power plant.
March 1994 – January 1995	Operations Manager - power plant Management of operations of 900MW open cycle and combined cycle gas-fired power plant.
October 1991 – February 1994	Manager (Engineering Services - Electrical) - power plant Management of power plant maintenance scheduling, spares procurement, engineering modifications and contracting services
July 1983 – September 1991	Senior Engineer (Control & Instrumentation) - power plant Maintenance of Control & Instrumentation Equipment of 240 MW open-cycle oil-fired gas turbines
September 1980 – January 1983	Engineer (Control & Instrumentation) - power plant Maintenance of Control & Instrumentation Equipment of 600 MW oil-fired thermal plant

## Nguyen Binh

Manager General  
Institute of Mining Science and Technology (IMSAT)  
Vietnam National Coal Corporation (VINACOAL)  
Viet Nam

### Education

1968 - 1975	Studied in Moscow Mining Industry and graduated
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1995 - 1997

diploma of Physical Process of Mining Development.  
held thesis post graduation of Doctor of Science in Hanoi  
University of Geology and Mining.

## Professional Experience

Have carried on: the natural condition of coal deposits to select the suitable technology as well as environment, stability of open-cast sites, surface deformation and subsidence due to underground mining, methane emission, strengthening coal and soft mass in mines, consultant and coordinator for International Co-operation Development projects. In 1998 worked in Asian Center for Energy (ACE) as coordinator for Asian Coal Analyze Project in Jakarta, Indonesia.

## Sameer Shrestha

Senior Research Associate  
Center for Energy-Environment Research and Development (CEERD), Asian Institute of  
Technology  
Thailand

He holds M. E. degree in Energy Technology from Asian Institute of Technology, Bangkok. He has over five years of research experience in the energy and environment field. Before joining at CEERD, he spent over three years at Thailand Environment Institute (TEI) as Research Associate, during which period he was involved in various projects related to country specific climate change studies. His main areas of interest concern with energy planning and environmental issues related to energy use.

## Kluephan Baitrakul

Environmental Impact Evaluation Division Office  
Environmental  
Policy and Planning  
Thailand.

## Education

M.S. (Environmental health Science) Polytechnic Institute of New York, U.S.A., 1980 B.S.  
(Sanitation,) Mahidol University, 1974

## Professional Experience

October 1998 - Present	Director, Environmental Impact Evaluation Division, Office of Environmental Policy and Planning
January 1994 - October 1998	Director, Urban Environment and Area Planning Division, Office of Environmental Policy and P l a n n i n g .
21 July 1993 - 21 January 1991	Manager Environmental Services Division, SECOT CO.,

September 1992 - July 1993	L Director, Eastern Regional Environmental Office.
1990 - 1992	T Office of Environmental Policy and Planning.
1980 - 1990	D Chief of Industrial Impact Evaluation Division, Office of the National Environment Board.
April 1980 - July 1980	Staff of Industrial Impact Section, Environmental Impact evaluation Division, Office of the National Environment Board.
1974 - 1978	Environmental Laboratory Technician Chemtech Consulting Group, Inc New York, U.S.A.
April 1974 - October 1974	Sanitarian, Nuisance Control Section Environmental Health Division, Department of Health, Bangkok Metropolitan Administration.
	Temporary Staff, Family Planning Research Project, Biostatistics Department, Faculty of Public Health, Mahidol University

## Training, Seminar and Study Tour

April 2000	Study tour on Environmental Management of Coal Fired Power Plant, Hekinan, Osaka and Tokyo, Japan. April 2000
February - March 2000	Study tour on Environmental Management of Polycarbonate and BPA Resin, Houston, Texas, U.S.A.
March 1998	2000 International Conference on Strategies & Management Tools for sustainable Development in Industry, Taipei, Taiwan
October 1996	Fifth International Workshop on the ECO-ASIA Long Term Perspective Project, Tokyo, Japan.
October 1996	Fourth International Workshop on the ECO-ASIA Long Term Perspective Project, Tokyo, Japan.
August 1996	First Project Coordination Committee, Tokyo, Japan.
January 1996	ECO-ASIA Steering Committee Meeting, Tokyo, Japan.
August 1995	Study Tour "Landfill Siting and Management Tour", U.S.A.
March 1995	Study tour "Environmental Plan and Monitoring", U.S.A.
August 1994	ASEAN Working Group Meeting on Environmental Management, Singapore.
March 1994	Study Tour Land Readjustment, Japan.
March 1993	Seminar "Resolving Environment Development Conflicts: Private- Public Sector Partnerships", Bali, Indonesia.
January 1992	Study Tour "Environmental Conservation and Industrial Pollution Control", Japan.
October 1991	Study Tour "Utilization and Recycling of Industrial Waste", the People Republic of China.
January 1990	Conference "World Clean Energy" Geneva, Switzerland.
October 1989	Training "Toxicology of Heavy Metals. Occupational Safety and Health in mining and Metallurgy, Yugoslavia.
1988 -	Conference "Safety and Loss Prevention in the Chemical and Oil Industries," Singapore.
1985-	Training "Environmental Administration (Administration of Pollution Control), Japan.
1982 -	Seminar "Wastewater Disposal in Asia" Kathmandu, Nepal.
	Training "Acoustic Measurement for Environmental

Protection, Bandung, Indonesia.

## References

- 1998 Case Study on Environmental Impact Assessment in Thailand, February 1998.
- Joined the study of the following Initial Environmental Examination reports during work at office of the National Environment Board.
- 1991 Pulp Industry Project of Forestry Industry Organization at Burerum and Ubolratchatani Province.
- 1992 Medium Scale Industrial estate in Sub-urban Area of B a n g k o k .
- 1991 Upper South Development Project :Industrial Estate Environmental Management
- 1988 Liquefied Natural Gas Project, Suratthani.
- 1987 Samuthsakorn Industrial Estate.
- 1981 Basic Industry Project on the Eastern Seaboard Area

## Special Experience

Consultancy of Energy Technology and.-. Environment Project, Technical Promotion Association "Thai-Japan".

- Invited lecturers, Mahidol University Sukhothai Thammathirat University, Asian Institute of Technology, The King Mongkut Institute of Technology Bang Mod, Kirk University.
- Invited Lecturers on Industrial Environmental Management for Private Sectors and Government Offices.
- Invited lecturers on Urban Environmental Management for Government Offices.

## Charlotte Griffiths

Senior Manager  
World Coal Institute  
United Kingdom

Charlotte Griffiths is Senior Manager of the World Coal Institute, an international non-governmental association of coal producers and coal consumers.

The World Coal Institute has Category II Consultative Status with the United Nations Economic and Social Council and Consultative Status with the United Nations Industrial Development Organisation.

The principal objective of the World Coal Institute is to promote the merits of coal by:

- providing a “voice” for coal in international debates on energy and the environment;
- improving awareness of the importance of coal as the single largest source of fuel for the generation of electricity;
- widening the understanding of the vital role that metallurgical coal fulfils in the worldwide



production of steel on which all industry depends;

- disseminating information on the advances in modern clean coal technology and methods leading to improved efficiency and environmental performance in mining, preparation, transportation and use of coal;
- highlighting the long-term dependence on coal to meet world energy demand.

Charlotte has an Honours Science Degree from the University of Reading, UK. During her eight years with the World Coal Institute she has developed a strong knowledge base of the global coal industry. She has responsibility for the Institute's website, publications and other promotional material, together with coordination of international meetings and industry workshops. Charlotte has managed WCI events addressing environmental aspects and clean coal technology opportunities in Thailand, Indonesia, India, Malaysia, the Philippines, Venezuela and the UK. She has represented the Institute at international and regional forums, including the United Nations and APEC EWG – and at industry meetings.

## **Louis Wibberley**

Project Leader  
Sustainable Technology  
BHP Centre for Metallurgy and Resource Processing  
Newcastle, Australia

Louis Wibberley is a research associate at BHP's Centre for Metallurgy and Resource Processing, and a Professor in the Centre for Sustainable Technology at the University of Newcastle. His research team has built up a world-class capability in life cycle analysis and techno-economic modelling, and has helped make sustainable development a strategic theme for BHP.

Specific research interests involve a wide range of process metallurgy, environmental and sustainability issues, with recent activities including:

- Development of practical LCA tools for the construction industry
- Environmental impacts of the Sydney 2000 Olympics.
- Youth education in Sustainable Development.
- Large-scale biomass production to sweeten coal-based for power and iron production.
- Intra-business process integration.
- Contaminated site cleanup.
- Value adding slag and ash.
- Novel coal-based iron making technologies.
- Environmental credentials of coal.

## **Seung Soo Park**

Power Generation Laboratory  
Korea Electric Power Research Institute  
Taejon, Korea

### **Education**

1982

Received B.S in Chemical Engineering from Inha University

1989

Received M.S in Chemical Engineering from Inha University  
Received Ph.D. in Chemical Engineering from Inha University

## Special Experience

1993 – Present

Senior member of technical staff in the Environmental  
Research Group with Korea Electric Power Research Institute  
Researched process design and development of FGD for 7 years.

## Akihiro Saiga

Chief Engineer  
Energy and Environmental Development Dept.  
Takuma Co. Ltd.  
Japan

## Education

Received Master of Engineering for the material mechanics from Kobe University, Japan

## Professional Experience

Since I joined Takuma and was assigned the current position, I have studied the circulating fluidized bed technology and Combustion technology. Takuma introduced CFB technology from Kvaerner EnviroPower AB in Sweden. In addition, Takuma has a long experience for stoker boiler and fluidized bed boiler and MSW incinerator.

We have the test plant of Circulating fluidized bed boiler in our factory.

Until now, we studied the CFB characteristics and combustion characteristics for several kinds of fuels (COAL, RDF, Sewage sludge, waste plastic and so on.) used test plant.

## References

- Processing of The 4<sup>th</sup> SCEJ Symposium On Fluidization in Japan
- The combustion Characteristics of Various RDF in Circulating Fluidized Bed
- Processing of The 5<sup>th</sup> SCEJ Symposium On Fluidization in Japan
- The mixed combustion characteristics of Sewage Sludge and Municipal Waste, And Reduced Action of N<sub>2</sub>O in Sewage Sludge combustion with CFB boiler

## Hotta, Arto Väinö Ilmari

Director  
Fluidized Bed Applied Technology  
Foster Wheeler Energia Oy  
Finland.

MSc, Engineering, 1982 Technical University of Lappeenranta

Arto Hotta has been working with fluidized bed technology in Ahlstrom Pyropower from 1983 to

1995, and from 1995 in Foster Wheeler Energy International Inc. after the merger of the companies. The current position is Director, Fluidized Bed Applied Technology in Foster Wheeler Energia Oy. The responsibilities include e.g. fluidized bed process development, process tuning and testing.

The professional background includes boiler performance design, managerial positions in CFB process development both in Finland and USA, managing of field service operations and leading of the Boiler Service business unit in Foster Wheeler Energia Oy.

Arto Hotta is a member in the Boiler Safety Committee in Finland. He has prepared several presentations for international conferences in the field of Foster Wheeler's CFB technology. He is also a co-author in Paper Making Science and Technology book series (Book 6. Chemical Pulping: Combustion of Bark).

## Sun Shaozeng

Division of Thermal Energy Engineering,  
School of Energy Science and Engineering,  
Harbin Institute of Technology,  
Harbin, Heilongjiang Province, P. R. China

### Education

1991 - 1995	Harbin Institute of Technology, Harbin, China, School of Energy Science and Engineering, part time doctoral student, Dr. Eng. degree conferred by Harbin Institute of Technology in 1995,
1984 - 1987	Harbin Institute of Technology, Harbin, China, Department of Power Engineering, graduate student M. Sc. degree conferred by Harbin Institute of Technology in 1987
1980 - 1984	Harbin Institute of Technology, Harbin, China, Department of Power Engineering, undergraduate student B. Sc. degree conferred by Harbin Institute of Technology in 1984

### Professional Experience

July 1987 - October 1998	Associate Professor (1994-), Lecturer (1989 - 1994) and Assistant (1987 - 1989), Division of Thermal Energy Engineering, School of Energy Science and Engineering, Harbin Institute of Technology, Harbin, China
October 1998 - October 1999	Academic visitor, Division of Mechanical Engineering, School of Engineering, Cardiff University, Cardiff, Wales, UK
October 1999 -	Professor (2000 -), Associate Professor (- 1999), Deputy Director of Research

Institute of Combustion Engineering (2000 -),  
School of Energy Science and Engineering,  
Harbin Institute of Technology, Harbin, China

## Main Research Interests

Coal Combustion Science and Technology, Biomass Gasification.  
Five inventions were patented.

## References

More than 50 papers were published in Journals and Conference Proceedings on Pulverised Coal Combustion and Fluidized Bed Combustion.

## Zhang Yong

Department of Production,  
Henan Provincial Electric Power Company,  
Zhengzhou, 450052, Henan, P. R. China

## Education

1986 - 1989	Harbin Institute of Technology, Harbin, China, Department of Power Engineering, postgraduate student M. Sc. degree conferred by Harbin Institute of Technology in 1989
1982 - 1986	Huazhong University of Science and Technology, Wuhan, China, Department of Power Engineering, undergraduate student B. Sc. degree conferred by Huazhong University of Science and Technology in 1986

## Professional Experience

May 1989 - September 1993	Engineer (1992 -); Assistant Engineer (1989 - 1992), Department of Production, Henan Provincial Electric Power Company, Zhengzhou, 450052, Henan, P. R. China
October 1993 - September 1994	Engineer, Zhengzhou Thermal Power Plant, Zhengzhou, P. R. China
September 1994 -	Deputy Director (July, 2000 -), Division Head (1999 - July, 2000), Senior Engineer (1997 -), Engineer (1994 - 1997) Department of Production, Henan Provincial Electric Power Company, Zhengzhou, 450052, Henan, P. R. China

## References

Several papers were published in Journals and Conference Proceedings on Boiler Technology.

## Xu Shisen

Director  
New Power Technology Center of Thermal Power Research Institute  
State Power Corporation  
P.R. China

Dr. Xu Shisen is director of the New Power Technology Center of Thermal Power Research Institute of State Power Corporation of China. He received Bachelor, Master and doctor degrees in thermal power engineering from the Xi'an Jiaotong University, P.R.China. He has thirteen years of extensive studies of coal combustion, solid-gas two phases flow and IGCC technology. Now he is one of the leaders in charge of the study project on IGCC 's key technologies that funded by Ministry of Science and Technology of China and State Power Corporation of China.

## Frank M. Mourits

Senior Coal Specialist  
Natural Resources Canada  
Ottawa, Canada.

Dr. Frank Mourits is the Senior Coal Specialist with the federal department of Natural Resources Canada in Ottawa, Canada. In this central position, he covers the policy, technological and environmental aspects of the Canadian domestic and export coal production and utilization chain, with particular emphasis on clean coal technology and climate change issues.

Within the department, he is involved in the coordination and liaison of many coal/energy/climate change-related activities. He is actively involved in the activities of the National CO<sub>2</sub> Capture and Storage Steering Committee, which are seeking to advance the CO<sub>2</sub> capture and storage option in Canada. He is also the Canadian Federal Government's representative on the Zero-Emission Coal Alliance (ZECA), a newly formed Canada-U.S. consortium, which aims to develop a zero emission coal-to-electricity technology.

Dr. Mourits is the Canadian representative on the APEC Experts' Group on Clean Fossil Energy, and the UN-ECE Experts Group on Coal and Thermal Power.

Prior to this position, Dr. Mourits was a Senior Research Scientist, involved in fossil fuel conversion and petroleum recovery technology at CANMET, the R&D arm of the same department.

Before joining the Canadian Federal Government in 1989, he was as Senior Research Chemist, leading a research program in the area of heavy oil emulsion separation at the Saskatchewan Research Council in Regina, Canada. He was also involved for a number of years in various coal gasification and liquefaction research projects at Saskatchewan Oil and Gas Corporation, Alberta Research Council and Saskatchewan Power Corporation.

Dr. Mourits holds B.Sc. and MSc. degrees in Physical Chemistry from the University of Amsterdam in the Netherlands (1972), and a Ph.D. degree from the University of Regina, Canada (1979).

## **Scott M. Smouse**

Senior Management and Technical Advisor-International  
National Energy Technology Laboratory (NETL)  
U.S. Department of Energy  
U.S.A.

Scott Smouse has 20 years experience in nearly every aspect of fossil energy utilization and power generation. Currently, he is Senior Management and Technical Advisor-International for the U.S. Department of Energy's National Energy Technology Laboratory (NETL), coordinating all international activities within the Laboratory. NETL was designated as the U.S.'s newest and 15th national laboratory in December 1999 by Energy Secretary Richardson. NETL previously was the Federal Energy Technology Center.

He was previously a Project Development Manager in former Pittsburgh Energy Technology Center's Office of Clean Coal Technology, where he managed several multi-million dollar cooperative CCT demonstration projects. From 1986-1995, he held several positions of increasing responsibility in the Coal Combustion R&D Division, including being the Leader of the Pilot-Scale Combustion Group.

From 1984-1986, he worked in the Fuels Technology Group at Babcock & Wilcox Company's Research & Development Center, where he conducted fuel quality and combustion research. He was a Technical Specialist for the DUSCO Division of Dearborn Chemical Company from 1981-1982, providing support for the company's sales of fuel additives to the utility industry. He started his career in 1980 with Pope, Evans & Robbins, Inc. Consulting Engineers on their USDOE-funded 30-MW<sub>e</sub> Multi-Cell Atmospheric Fluidized Bed (AFB) Boiler Project in Rivesville, West Virginia, as manager of their fuels and air quality testing laboratories.

He received a B.S. degree in Chemistry from Fairmont State College in 1980 and a M.S. degree in Fuel Science (Combustion) from Penn State University in 1984. He has been very active in the American Society of Mechanical Engineer and previously served as Chairman of the Fuels and Combustion Technology Division.

## **Wayne Edwards, P. Eng.**

Vice-president  
Levelton Engineering Ltd.  
Richmond, B.C., Canada

Wayne Edwards. is a Vice-president a of Levelton Engineering Ltd. and manager of the Environment and Energy Division of the company, which provides services in the areas of energy and fuel options, emission control technology, air quality planning and assessment, meteorology and climatology, emission and air quality testing and analytical chemistry.

Wayne received Bachelor's and Master's degrees in mechanical engineering from the University of British Columbia, Vancouver, Canada in 1975 and 1977, respectively. After graduation he work for two years with the Alberta Research Council in Edmonton conducting research on modeling and field trials for underground coal gasification technology, focusing on interpretation of operating data, groundwater and air flow modeling and gasification process parameters. He then joined Levelton Engineering in 1979 where he has worked in a wide range of areas, with an emphasis on:

- Industry, regional and national emissions inventories;
- Evaluation of the feasibility of coal resources for underground coal gasification;
- Technical and economical feasibility of biomass energy systems;
- Alternative and future motor fuels and vehicle technologies;
- Environmental impact assessments and approvals for gas plants, power plants, chemical plants and transportation infrastructure projects;
- Air pollution control technologies;
- Regional air quality planning;

Wayne is a registered professional engineer in the provinces of British Columbia and Alberta and a member of the A&WMA, the International Association for Impact Assessment and the SAE.

## Clarence Lowell Miller

Director  
Office of Coal Fuels and Industrial Systems  
Office of Coal and Power Systems  
US Department of Energy  
U.S.A.

C. Lowell Miller is Director, Office of Coal Fuels and Industrial Systems. He is responsible for the Research, Development and Demonstration efforts of the Department of Energy directed toward the conversion of coal into transportation fuels, alternate energy products, chemical feed stocks, solid fuels and its more efficient, economic and environmentally acceptable use in industrial processes. During his service with the Department of Energy and its predecessor agencies, Dr. Miller has, at times, been responsible for the planning, implementation and management of the joint Government-Industry cost-shared program to design, build, and operate a new generation of advanced clean coal technologies, Director of the Surface Coal Gasification and Coal Conversion Programs, and a Senior Research Engineer directing basic studies in coal chemistry and alternative fuels. As part of these responsibilities, he also has served as the principal representative of the Office of Fossil Energy to the Energy Working Group of the APEC and as a spokesman for the Office in its activities within the Asia-Pacific Region. Prior to the start of his career with the Department of Energy, he was employed by private industry as a research, development and process engineer with responsibilities for developing new chemical processes optimizing the operational performance of innovative production systems and for building prototype demonstration facilities.

Dr. Miller received his Ph.D. in Chemical and Fuels Engineering at the University of Utah and is the author of numerous papers as well as holder of several patents.

## John Karas

Manager  
Coal Industries Section  
Energy Minerals Branch  
Coal and Mineral Industries Division  
Department of Industry Science and Resources  
Australia

Mr Karas joined the Australian Public Service in 1980 having completed an honors degree in

economics at the University of Western Australia. His first appointment was to the Australian Treasury where he worked on economic and financial issues associated with Australia's international aid program.

In 1983 he moved to the mineral resources area of the former Department of Primary Industries and Energy. In the period to 1990 he provided economic and policy advice on a range of resource industries including diamonds, base metals, aluminum and uranium.

He took up a position in the Department's central policy area in 1990 where he participated in the formulation of a national sustainable development strategy leading up to the first UN Conference on the Environment.

Since mid 1992, apart from a short period in the greenhouse policy unit, he has been working in the coal policy area of the Department. This area, together with other energy and resource functions, moved to the Department of Industry Science and Resources in 1999.

Mr Karas' work on coal has involved the full range of domestic and international issues associated with providing coal and energy policy advice to the Australian Government. He has been closely involved in the development of APEC coal activities and the strengthening of bilateral cooperation on coal between Australia and many countries throughout the region.

## **Sriwan Eamrungroj**

Vice President  
Business Development Department  
Petroleum Authority of Thailand (PTT)  
Thailand

### **Education**

MBA. Thammasa University  
B.Eng. (Mechanical Engineering), with second-class honors,  
Chulalongkorn University

### **Professional Experience**

1981 - 1989	Senior analyst, Supply & transportation department Esso Standard Thailand
1989 - 1993	Supply-planning division manager, National Petrochemical Public Co., Ltd.
1994 - 1995	Business planning director, National Petrochemical Public Co., Ltd.
1995 - 1996	Vice President, business planning & information system Department, PTT Gas Petroleum Authority of Thailand
1996 - Present	Vice President, business development department, PTT Gas Petroleum Authority of Thailand



# Thierry Lefevre

Director of CEERD/AIT (formerly EPCCT)  
ESCAP Central Consultant  
Professor

Asian Institute of Technology (AIT)  
Economic and Social Commission for Asia and the Pacific (ESCAP)  
Thailand

## Education

- Ph.D. in Control and Operational Research, 1972, Laboratoire d' Automatique et d'Analyse des Systemes (LAAS, CNRS), University Paul Sabatier, Toulouse, France; Master (D.E.A.) in Control and operational Research, 1971, Laboratoire d' Automatique et d'Analyse des systemes (LAAS, CNRS), University Paul Sabatier, Toulouse, France;
- Master (MBA) in Business Administration for Engineers (Candidate), University of Simon Bolivar, Caracas, Venezuela;
- Mechanics and Electronics Engineer, 1970, ESME, Paris, France.

## Professional Experience

- Teaching, academic and project research in the field of energy economics, planning and policy;
- Coordinator for Asia of the Post-Graduate Technological Studies (PTS) Programme between the European Commission and AIT;
- Director of the center for Energy-Environment Research & Development (formerly EPCCT);
- ESCAP Central Consultant of PACE-E/EEP1, EEP2 and EEP3 (RAS/92/071) – UNDP/ESCAP Project
- Director of “Asian Energy News”;
- Assessor of “Hydrocarbon Asia” and “Hydrocarbon Asian Business Report (HABR)”, AP Energy Business Publications Pte, Ltd., Singapore;
- ADB, AEEMTRC, APEC, UNDP, FAO, and World Bank Consultant.
- External Editor of ASEAN Energy Journal, AEEMTRC, Jakarta, Indonesia;
- Refer for the Journal of the International Energy Initiative “Energy for sustainable Development”, Bangalore, India;
- Member of the Governing board of APDC/APENPLAN, Kuala Lumpur, Malaysia;
- Member of the UNDP Energy-Environment Advisory Group for PACE-E (RAS/92/071);
- Member of external Evaluation Team of IAEA’s Programme C: Comparative assessment of Energy Sources, Vienna, Austria;
- Member of IAEA’s DECADES PROGRAMME Steering Committee, Vienna, Austria.
- Member of GASEX 2002 advisory Board
- Member of the Power-Gen Asia Programme Committee
- Review of Asian Development Bank’s Energy Sector Policy, (Asian Development Bank), Bangkok, Thailand,
- January 1999, *Project Leader*.
- Estimating Health & Environmental Externalities of Electricity Generation in Thailand, (International Atomic Energy Agency), Bangkok, Thailand, April 1999, Project Leader.
- Iran Energy Sector Development Study: Overseas Training on Energy Supply- Demand Analysis and Forecasting, *Project Leader*.
- Organization of Regional Trainings and Training Workshops in the field of Energy Environmental Planning (EEP activities of the PACE-E Project);

- Project Director of ADB T.A. No. 1628-PRC: Energy-cum-Electricity Demand and Supply Analysis;
- Study on International Comparison on Energy Efficiency Indicators: Asian Region (Group 3E-Energy Efficiency Policies-WEC);
- ESCAP Central Consultant of the Regional Energy Development Programme (REDP);
- Consultant in MAL/93/001: Energy policy Analysis and Planning to the year 2020-Energy Master Plan in Malaysia;
- AIT/AEEMTRC Energy-Environment Project: Case of Thailand;
- Director of the Institute of Energy and Team Leader of the Energy Planning Section of USB, Venezuela;
- Director of Post-graduate Programs, USB, Venezuela;
- Director of Electrical Engineering Department of IUTRC (Caracas) and IUTC (Cumana), Venezuela.

## Fernando Y. Roxas

Head  
Privatization & Restructuring External Office (PREO)  
National Power Corporation  
Philippines

Dr. Fernando Y. Roxas has been Head of the Privatization & Restructuring External Office (PREO) of the National Power Corporation, Philippines for the last 5 years. Previous to this position, Dr. Roxas was Manager for Strategic Planning, CORPLAN, for the same Government Utility. As Head of PREO, Dr. Roxas has worked with three (3) Congresses and three (3) administrations of NPC and the Department of Energy to craft the necessary legislation required to restructure the Philippine Power Sector and privatize NPC.

Part of Dr. Roxas' responsibilities is to oversee, from NPC's point of view, the drafting of technical codes, standards and Implementing Rules & Regulations (IRRs) to govern the restructured industry. Dr. Roxas is also responsible for interfacing and educating the general public and various power sector stakeholders on the benefits of the industry reform package.

PREO is also part of the group designing the competitive market rules, the design of the successor companies to be privatized and negotiations with creditors/ multi-lateral lenders who have financial exposure in NPC. Creditor consent is an essential prior to divestment of assets.

Dr. Roxas has given numerous lectures on restructuring and privatization related topics in the US and in Asia. The most recent talk regarding the subject of IPPs that Dr. Roxas delivered was in Phnom Penn, Cambodia in a forum organized by the ADB last October 1999.

Dr. Roxas received his BSc in Geology from the University of the Philippines; an MSc in Engineering Geology from AIM, Bangkok; a Master in Business Management from AIM, Manila; and a Doctorate in Business Administration (High Distinction) from DLSU in Manila.

Dr. Roxas is a painter with three public exhibits to his credit and cultivates an interest in music and literature. He is also a regular member of Mensa and the National Research Council of the Philippines.

## Ni Jiamin

Air Pollution Control Design Department,  
Power Plant Division,  
Ishikawajima-Harima Heavy Industries Co., Ltd.  
Japan

### Education

Chiba University, Chiba, Japan  
Master of Applied Chemistry Engineer, 1997

### Professional Experience

April - December 1997	Joined Basic Design Group of Air Pollution Control Design Department, IHI. Serve as design engineer for in-Line Type Flue Gas Desulfurization System in Thai Union Paper Co., Ltd.
January 1997 - Present	HSINTA Unit 3&4 Flue Gas Desulfurization Project in Chinese Taipei. Serve as a design engineer and assistant manage for equipment.
July 1999 - March 2000	XIAJIAO Unit 2 Flue Gas Desulfurization Estimate Project in P.R.China. Serve as a supervisor of design.
March 1999 - Present	TAICHONG Unit9&10 Flue Gas Desulfurization Project in Chinese Taipei. Serve as a design engineer and assistant manage for equipment.

## Jim Zhou

Principal Engineer and Combustion Specialist  
Babcock & Wilcox  
U.S.A.

### Education

Jim Zhou was graduated from Zhejiang University for both undergraduate in 1962 and postgraduate in 1966 degrees in Hangzhou, PRC. His areas at Zhejiang University were Thermal Power Engineering and Combustion Technology.

## Professional Experience

Since 1990, Jim Zhou joined Babcock & Wilcox with a position of the Principal Engineer and combustion specialist. He works on the areas of burner design and development, emission control as well as the downshot firing technology burning anthracite and low volatile coals. In the past ten years, he has been actively involved in the areas of burner upgrading project in China and has played a key role.

He has been heavily involved in promoting technology exchange between B&W and Chinese organizations such as utility power industry; design institutes; test institutes and universities. Recently he has actively involved promoting mutual cooperation between US and Chinese organizations.

Prior to join B&W, Jim Zhou has worked at 3 US and Canadian universities to conduct R&D programs on fossil fuel firing. Before he moved to North America almost 20 years ago, he was a faculty member of Chinese universities.

His professional activities outside of B&W include attending and making presentations at technical conferences. He was appointed as advisors by three Chinese university or research institutes. He has accomplished a fair amount of publications.

## Katsuyoshi Ando

President  
Japan Coal Energy Center  
Vice President  
Japanese Committee for Pacific Coal Flow (JAPAC)

## Education

Graduated from Muroran Institute of Technology (March 1960)  
Bachelor of Engineering (Mining Engineering)

## Professional Experience

July 1997 - Present	President, Japan Coal Energy Center (JCOAL)
July 1992 - July 1997	Executive Director, New Energy and Industrial Technology Development Organization (NEDO)
Jane 1989 - July 1992	Senior Managing Director, Industrial Development Institute
June 1987 - June 1988	Deputy Director – General for Industrial Location and Environment Protection, MITI
October 1986 - June 1987	Deputy Director – General for Technology Affairs, Agency of Industrial Science and Technology, MITI
August. 1985 - October 1986	Counsellor for Industrial Location and Environment Protection, MITI
October 1982 - August 1985	Director, Coal Industry Division, Agency of Natural Resources and Energy, MITI
March 1980 - October 1982	Director, Industrial Location and Environment Protection

April 1960

Bureau, MITI

Joined MITI

## Chanin Vongkusolkii

Group President  
Banpu Public Co., Ltd.  
Thailand

### Education

Bachelor of Economics, Thammasat University  
M.B.A. Finance, St.Louis University, U.S.A.

### Professional Experience

1984 - Present	Director, Mitr Phol Sugar Corp. Ltd.
1983 - Present	Director, Royal and Sun Alliance Insurance (Thailand) Co., Ltd.
1983 - Present	Group President, Banpu PLC
1983 - 1990	Director, Amarin Plaza PLC
1983 - Present	Director, The Cogeneration PLC
1983 - Present	Director, United Standard Thermal PLC

## Paul S. Tish

Director  
Industrial Technology  
UNOCAL New Ventures Limited  
Thailand

Mr. Paul S. Tish is the Director of Industrial Technology for UNOCAL New Ventures Limited. He emphasizes his activities to grow natural gas customers in power generation sector, industrial sector and transportation fuel sector. He works closely with EGAT, industrial customers, architecture & engineering firms and equipment suppliers in Thailand and abroad. He also works as a liaison with UNOCAL offices in El Segundo, Sugar Land, and Unocal Asia Pacific Ventures in Singapore. He assists other UNOCAL Offices in South East Asia, which includes Indonesia, the Philippines, Vietnam, Cambodia, Myanmar and Bangladesh

Mr. Tish participated in the development of a 700 MW IPP project, known as Independent Power (Thailand) Ltd. or IPT, located next to the Thaioil Refinery in Sri Racha, Choburi, Thailand. He initiated the joint venture among UNOCAL, Thaioil and Westinghouse and participated in all phases of the project development.

Mr. Tish started his career with UNOCAL at the Los Angeles refinery, California in 1979. His expertise covers several areas which include 15 years of power project development, economic evaluation, power plant conceptual and process design, engineering and construction; 15 years of oil refinery operations, economic evaluation, process design, engineering and construction. He devotes

his profession to industrial utility systems and infrastructure design, energy conservation, energy management as well as safety and environmental protection plus pollution control technology evaluations, applications and planning.

Mr. Tish received his first degree in Marine Science from Chulalongkorn University in 1972. He went to the USA to further his education and received another degree in Chemical Engineering at California State, Polytechnic University.

## **Chaya Jivacate**

Mr. Chaya Jivacate is a retired senior officer of the Electricity Generating Authority of Thailand (EGAT); his last position was the Director of the Demand Side Management Office of EGAT. He has been a special advisor on renewable energy to King Mongkut's University of Technology, Thonburi, special advisor to the Energy Council of the Parliament, and executive board member of the Energy Technology Center of the National Science and Technology Development Agency. He is presently an in-house consultant on solar energy to the National Energy Policy Office (NEPO).

Graduated with an MSc in Microwave Physics from the University of Surrey, the UK in 1970, Mr. C. Jivacate has extensive work experience in the energy sector and is the founder of renewable energy projects for electricity generation of EGAT, starting around the year 1977. Major past achievements are, for example, the demonstration grid-connected power plant using geothermal (Chiang Mai province), wind turbine generators (Phuket province), the grid connected of PV/Hydro demonstration plant (Sa Kaeo province), the Battery Energy Storage (BES) system (Chiang Mai province).

During 1990-1999, being then the Director of the Demand Side Management Office of EGAT, Mr. C. Jivacate was responsible for the campaigns on energy-efficient electrical appliances, the attitude creation program ("Green Classroom"), and such pilot projects as Energy Service Company (ESCO); Load Research by using Non-Intrusive Appliance Metering System (NALMS). and DSM Information Center.